

Serial No. 09/867,664

Docket No.: 1359.1048

REMARKS

In accordance with the foregoing, claim 1 has been amended to incorporate therein limitations of claim 2/1 and the latter has been cancelled, claim 19 has been amended similarly to claim 1 so as to incorporate the functional limitations of claim 2/1 and new claim 20 is presented, directed to a program readable by a computer for controlling a computer to perform echo canceling processing for a full-duplex communication system.

No new matter is presented and, accordingly, approval and entry of the amended claims 1 and 19 and new claim 20 are respectfully requested.

STATUS OF CLAIMS

Of the originally filed claims, claims 1, 2, 5, 10, 13, 18 and 19 are rejected and all remaining claims are objected to.

Independent claims 1 and 19 have been amended and new independent claim 20 has been added and, in accordance with the cancellation of claim 2/1, claims 1 and 3-20 are pending herein. Reconsideration of claims 1 and 3-19 are requested and consideration of new claim 20 as well as requested.

ITEM 2: REJECTION OF CLAIMS 1, 2, 5, 10, 13, 18 AND 19 FOR ANTICIPATION UNDER 35 U.S.C. §102(e) BY SONG (U.S. PATENT 6,678,254)

The rejection is respectfully traversed.

As noted in the foregoing, claim 1 has been amended to include the limitations of claim 2/1 and the latter has been canceled. The incorporation of the limitations of claim 2/1 into claim 1 has rendered claim 1 patentable over the art of record.

In the Action at page 3, dependent claim 2/1, as was heretofore pending, was rejected on the basis that an estimated echo (EST_ECHO) of Song (U.S. Patent 6,678,254) corresponds to a tuning signal of an echo canceling processing according to the present invention. More particularly, the Action asserts at page 3:

Referring to claim 2, Song discloses that the echo canceling system further comprises an adjusting portion (adaptive filter module 360) for receiving a tuning signal (EST_ECHO) of an echo canceling processing by a speaker (Figure 1, near-end terminal 110), wherein the echo canceling processing portion (NLP module 370) cancels the echo using the tuning signal (EST_ECHO)...

(Action at page 3)

Serial No. 09/867,664

Docket No.: 1359.1048

It is respectfully submitted that the Examiner erred in the interpretation and application of Song in the rejection of claim 2. Particularly, the EST_ECHO is not a tuning signal but rather a pseudo echo (see blocks 350 and 360 in FIG. 4) subtracted from the echo (see block 450 in FIG. 4). There is explained more specifically in the Song '254 patent at col. 5, lines 50-56:

Adaptive filter module 360 performs arithmetic operations on both the coefficients provided by coefficient update module 350 and the sampled receive audio to produce an estimated echo (EST_ECHO). EST_ECHO is made negative and loaded into summing circuit 450. Thus, EST_ECHO is subtracted from the echo.

In other words, the assertion of the examiner regarding claim 2 is incorrect.

Accordingly, it respectfully submitted that claim 1, as now amended to incorporate claim 2/1, patentably distinguishes over Song. All remaining claims depend directly or indirectly from claim 1 and accordingly inherit the patentable distinctions of claim 1 and likewise distinguish patentably over Song.

The dependent claims, moreover, introduce yet other patentably distinguishing recitations. For example, claims 10 and 18 recite that the speaker chooses execution or suspension of the echo canceling processing and of the sound characteristics detecting processing of the echo path. In contrast, a double talk detector of Song (block 380 in FIG. 4) detects whether a double talk condition in which two callers are talking at the same time exists and, if so, suspends an adaptive processing (a processing performed in block 350 in FIG. 4) and a cancellation of a residual echo (a processing performed in block 370 in FIG. 4). Thus, the configuration disclosed in Song does not necessarily carry out execution or suspension according to the speaker's decision. Accordingly, claims 10 and 18 further distinguish patentably over Song for these additional distinctions recited therein.

CONCLUSION

In accordance with the foregoing, it is respectfully submitted that the pending claims 1 and 3-20 distinguish patentably over the reference and rejections of record and, there being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Serial No. 09/867,664

Docket No.: 1359.1048

Respectfully submitted,

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Date: April 19, 2005

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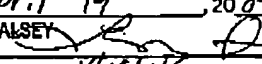
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